



US Army Corps
of Engineers®

HEADQUARTERS

ENGINEERING & CONSTRUCTION NEWS

VOLUME III NUMBER 1

OCTOBER 2000

OCTOBER'S THEME:

Engineering & Construction Technology Integration Branch

DWIGHT'S NOTES

The theme for this issue is "Engineering and Construction -- Technology Integration Branch". This is the third of six issues addressing the reorganized Engineering and Construction Division. The purpose of the theme article in these issues is to acquaint you with the new structure of the division and the functions of each branch in the division. The new Technology Integration Branch has a lot of responsibility and potential. M.K. Miles and his able team really have their heads in the game. They are actively involved with the R&D community to determine technology requirements and technology transfer strategies. His team members participate in numerous forums with private sector and government technology leaders. One team member, Jack Bickley, is becoming a go-to person for the Corps and SAME's Knowledge Management initiatives. Another team member, Nancy Blyer, is in charge of E&C new "learning program" which will provide the entire division with "situational awareness" in their professions and will help develop the team as highly effective technical leaders. I am very pleased with the progress this new branch has made in the first few months of its existence. I need your support working with them to keep the Corps at the head of the class in the effective application of new technology.

Sixty of the Corps best and brightest in E&C will vacate the Pulaski Building forever on 31 October. Our offices will move into the freshly renovated third floor of the Kingman Building on or about 2 November. I've visited the Kingman frequently since construction began a few short months ago. Baltimore District and their 8A design/build contractor have done a terrific job preparing first class office space for my team under considerable time and budget pressure. Thank you Baltimore District, their PM Joe Schaefer, HQUSACE Chief Architect Larry Delaney, HECSA and others for making this happen. The ten E&C people duty stationed at the main 441 "G" Street office have been very effective bringing E&C capabilities to the table with the entire HQUSACE team. A list of the E&C team along with their telephone numbers is attached for your information.

Kudos also to the team of structural engineers from around the Corps that formed up at Sacramento District to evaluate proposed alternatives to make the eastern span of the San Francisco-Oakland Bay Bridge into a "life line" bridge able to withstand seismic forces. The White House asked the Corps to provide an objective professional review of major retrofit and replacement options developed by the state and city governments. The Corps team reviewed a room full of data and reports producing a

highly credible report that has helped resolve protracted technical and political issues in a very short period of time. This was the Corps at its best. Great teamwork and terrific talent; making a difference.

I've been spending a lot of personal time in the last few months in partnership with Steve Browning and several other USACE SES leaders developing a set of policy proposals focusing on the Corps technical mission and competency. I'm pleased that the Corps leadership recognizes the need to refocus, re-shape, and rebuild our technical capabilities. Next week we'll talk about this at the Senior Leaders Conference after which I expect the Chief's transition team to zero in on a viable strategy. Whatever the Corps decides to implement in this regard, it will be consistent with our corporate commitment to the Project Management Business Process.

With all the press that the Corps has been receiving, sometimes we miss articles that show support for the Corps. One such article was an Associated Press Article on Corps Reforms. It is available at <http://content.entrpoint.com/content.asp?cid=656131&md5=e592072dcf4d84480be4b26139898444>.

On Friday, 6 October 2000, General Robert Flowers was confirmed by the Senate as the 50th Chief of Engineers. General Flowers will be taking command of the Corps on 23 October 2000 with a change of command ceremony at Fort Myers, Virginia. We are all very pleased to have our new Chief on board. In the next few months he will develop a Commander's Intent that will guide us throughout his four-year tour as Chief. We all need to rally around him as he helps the Corps to be all it can be.

Essayons,
Dwight

(Editors' note: If you want to share your thoughts with our readers regarding Dwight's Notes send an email to the E&C News editor (charles.pearre@usace.army.mil). A synopsis of your comments will be published in the next issue.)

ARTICLES

ENGINEERING & CONSTRUCTION -- SPECIAL ASSISTANTS

[Technology Integration Branch, Engineering and Construction Division](#)

DISTRICT OF THE MONTH

[Los Angeles District](#)

REORGANIZATION NEWS

[Status E&C Move](#)

UPDATE

[Machinery Anchorage Failure at Mel Price Lock](#)

[Our Service to the Nation](#)

[FY-01 Family Housing Workshop](#)

[A Proposed Sustainable Project Rating Tool \(SPRT\)](#)

[Construction Management in Excellence and Hard Hat of the Year Awards](#)

[Contractor of the Year Awards](#)

[Workshop on Seismic Evaluation and Rehabilitation of Civil Works Infrastructure](#)

DAM SAFETY

[Dam Safety 2000 and Corps of Engineers Dam Safety Meeting](#)

[USCOLD Call for Papers](#)

[Dam Safety Work Group](#)

INFORMATION

[Construction Warranty Initiative](#)

[Job Vacancies](#)

[Mississippi River Channel Improvement Features Prove Effective in Keeping Navigation Channel Open](#)

[During 1999 - 2000 Low Water](#)

[Keys to Knowledge Management](#)

[Upcoming Changes in RMS](#)

INFORMATION (CONTINUED)

[Partnering with ACIL](#)

[New Facilities Acquisition Career Field](#)

TRAINING

[Hydrology and Dam Safety: Dam Failures, Floods, and Spillway Adequacy](#)

[HQSACE Officer Sustainable Design and Development \(SDD\) Training](#)

VALUE ENGINEERING

[Barracks Value Engineering/Management](#)

OPEN DISCUSSION AND COMMENTS

[Response to PMBP Article](#)

[Lessons Learned System](#)

EDITORS' NOTES

[Subscribe to ECNEWS](#)

NEW TELEPHONE LIST

[New Telephone Numbers for Engineering and Construction Division](#)

THIS PUBLICATION WILL BE ISSUED ON A MONTHLY BASIS AND DISTRIBUTED BY E-MAIL AND POSTED ON THE INTERNET AT [HTTP://WWW.USACE.ARMY.MIL/INET/FUNCTIONS/CW/CECWE/NOTES](http://www.usace.army.mil/inet/functions/cw/cecwe/notes). IF YOU WOULD LIKE TO CONTRIBUTE ARTICLES OR HAVE SUGGESTIONS FOR FUTURE ARTICLES, PLEASE CONTACT CHARLES PEARRE, CECW-EP, 202-761-4531.

Engineering & Construction Technology Integration Branch

TECHNOLOGY INTEGRATION BRANCH, ENGINEERING AND CONSTRUCTION DIVISION

Technology Integration Branch is responsible for the integrating the various technology changes into the daily business process of the Corps of Engineers. These activities include:

1. The coordination and integration of the systems, computer, and information technology (IT) aspects of all Engineering and Construction Division (E&C) Automated Information Systems (AIS) as well as connectivity of these AIS with other Corps AIS;
2. Full responsibility for certain crosscutting technologies such as Geographic Information Systems (GIS) and Computer Aided Design and Drafting (CADD) systems. The branch facilitates the integration of other engineering models and systems into these systems including electronic navigation charts;
3. E&C's Knowledge Management (KM) activities, including E&C's web page development;
4. Coordination of all Civil Works Research and Development (R&D) priority setting and oversight as well as coordination of E&C oversight of all Army funded R&D affecting E&C activities;
5. Centers of Expertise integration with the R&D Program; and
6. Technology transfer efforts in the E&C arena.

Efforts in some of these areas are more specifically described below.

Engineering Automation Efforts: **Technology** Integration Branch is responsible for the oversight and integration of engineering design automation systems. The strategic objective is the integration of all engineering design tools in order to provide life cycle management of all electronic data associated with any project from programming, through design, construction, operations, renovation, and disposal. Interoperability between the tools is required to avoid duplicate entry of data used at different stages of the project. Data standards are needed to make interoperability a reality. To achieve our objective we will execute all our design, engineering, and construction missions under a unified CADD standard. HQ responsibility includes membership in the management groups of the CADD/GIS Technology Center, development of CADD policies on standards, oversight of standards implementation, interfacing with professional organizations and industry, and evaluating technological developments. Elements included in accomplishing this objective are:

- **The Total Integrated Project Delivery (TIPD)** project, which was initiated by CEMP, improves engineering services through the infusion of Information Technology (IT). “TIPD studies the engineering processes of the U.S. Army Corps of Engineers and identifies deficiencies that could be improved with technology. As new technologies become available, TIPD will assess these technologies and determine their ability to address or improve the engineering process.” (from TIPD Project Plan)
- **The Facility Engineering Framework (FEF)** is a companion effort to TIPD, being developed through the Engineering Research and Development Center (ERDC). “The objective of FEF is to provide a framework to automate engineering processes, integrate Commercial Off-The-Shelf Software (COTS), and connect engineering offices into virtual teams. The scope of FEF encompasses all engineering activities, both civil and military, engaged in the Corps of Engineers.” Technology Integration Branch works with ERDC to integrate these parallel efforts and avoid duplication.
- **FIATECH** is a private industry initiative, started by the Construction Industry Institute (CII), with similar objectives to TIPD and FEF. Technology Integration Branch works with this group to leverage our resources through partnering to accomplish common goals.
- **Computer Aided Design and Drafting (CADD)** software packages and associated application packages (i.e. InRoads) are used during the project design stage at all districts. The primary systems currently used are MicroStation and AutoCAD. The CADD/GIS Technology Center has developed A/E/C CADD Standards in coordination with NIBS, which has developed the National CADD Standard. Powerful software and hardware for CADD applications are constantly being introduced into the marketplace. These rapid technological advances will continue to impact the Corps business process. System developers are developing object-based software, which enables the creation of 3-D project models incorporating architectural, mechanical, and structural elements. These new software products allow the export of information from the graphic model into engineering design software for analysis, and the import of design data back into the model. Incorporation of these new tools into the design process will require a reeducation and change in the design culture within the Corps. Object based models will also make integration with CACES and SPECSINTACT a reality. Additional ongoing efforts are to integrate CADD with GIS and Facility management software.

-
- **Senior Advisory CADD (SAC) and Field Action CADD (FAC) Groups** were formed in 1996 to provide a link between Headquarters, the CADD/GIS Technology Center, and the Corps engineering field personnel. The SAC and FAC groups work together to aid all USACE districts in achieving maximum benefit from the use of their CADD/GIS resources, through the development and execution of CADD related projects. Technology Integration Branch provides oversight and support to these groups.
 - **CADD Standards Implementation Plan** is being developed by the Corps Systems Field Action CADD (FAC) Group to provide A/E/C CADD Standards. This plan will be an aid to districts throughout USACE, which have not yet been able to implement the Standards. General Milton Hunter signed a policy memorandum in July 1998 stating that all districts should use the Standards for any projects less than 35% complete. The Center has developed a WorkSpace for MicroStation, which will make implementation easier, and is working on a WorkSpace for AutoCAD, which will be available in the near future. The implementation plan incorporates the use of the Workspaces. The plan should be available for distribution to the field by the end of the calendar year. The MicroStation Workspace as well as tutorials and training files are available for download on the Center web page at <http://tsc.wes.army.mil> under Products/Utilities.
 - **Project Web Sites** using software and services by private industry is a new effort that should change the way the A/E/C industry does business. Technology Integration Branch is working with vendors on this new technology, the SAC/FAC, the TIPD working group and ERDC to evaluate this new technology and incorporate it into our business process.
 - **Electronic Bid Solicitation (EBS)** program, which was initiated and is maintained/upgraded as a CADD/GIS Technology Center (the Center) project, has developed a process for the delivery and distribution of construction contract solicitation documents in electronic form. Currently solicitation documents are posted on the Internet and provided to contractors on CD-ROM. The Center maintains the Tri-Service Solicitation Network web page, which links to government agencies currently advertising solicitations on the Internet. The Tri-Service Solicitation Network provides a link to the Army Single Face to Industry (ASFI) website for Corps projects, which will link to the Federal Government Solicitation Web Page (FedBizOps) in the near future. Technology Integration Branch coordinates the EBS efforts with Corporate Information (CECI) and Principal Assistance Responsible for Contracting (CEPR). Issues being addressed at this time include placing solicitations outside the firewalls, one door to the Corps, and integration with SPS (Single Procurement System.)
 - **E-commerce** involves the process of moving business transactions from paper based to electronic based, and specifically Internet based. Traditionally, USACE has taken a piecemeal approach to the e-commerce arena. Using a program based approach individual programs have been converted to electronic format. Generally, this has resulted in programs being CD-ROM or Internet based. However, in some cases, the transformation to electronic form is partial. In these instances, some portion of the transaction can be accomplished electronically, and some still requires paper. The e-commerce program, under the purview of Technology Integration Branch will examine these separate efforts, try to give them a unified structure, and move them to a completely electronic form, so that the uniqueness of these separate efforts will become transparent to the users. This will reinforce the one door to the Corps concept and simplify dealings with the Corps, for both contractors looking to work for the Corps and the customers that we serve.

-
- **Architect-Engineer Contract Administration Support System (ACASS) and the Construction Contractor Appraisal Support System (CCASS)** are databases on contractors working for the Corps of Engineers. ACASS is a database of selected information on Architect-Engineer (A-E) firms. ACASS provides required information for Federal Government selection committees to aid them in their process of awarding A-E contracts based upon qualifications and past performance. CCASS is a separate automated database of performance evaluations on construction contractors. The use of ACASS/CCASS for past performance history is mandated for all Department of Defense (DOD) agencies in the Defense Federal Acquisition Regulation Supplement (DFARS) to the Federal Acquisition Regulation (FAR). In June of 1998 ACASS took the lead in the Pentagon's effort to make contractor performance information readily available to all those in the federal government by launching a website. The site can be accessed by any federal agency authorized to hire A-E firms. However, some of the ACASS system is still dependent on paper-based inputs and the manual input of data. Issues being addressed at this time include reworking ACASS/CCASS to be more user friendly, making more of ACASS/CCASS web accessible, and integrating ACASS/CCASS with other Corps automated information systems.
 - **Geographic Information Systems (GIS)** is a powerful tool that combines relational database capabilities with a strong visualization component. Technology Integration Branch is the integrator of Programmatic as well as Science and Engineering Information through GIS. A user can query and analyze data relationally as well as spatially and visualize the results geographically. How can GIS help with data and system integration? Integration at two levels – programmatic level and scientific/engineering level.

1. Programmatically, GIS can be used to integrate business data and display programmatic information geographically. The Digital Project Notebook (DPN) has been doing just this for the last 5 years. The DPN is an Internet map-based digital application that presents information on all USACE Civil Works projects (<http://crunch.tec.army.mil/>). The vision is to integrate more programmatic databases using the DPN's GIS capabilities to develop one corporate GIS viewing tool (GIS-V) that will view all Corps civil, military and environmental projects geographically. In addition to projects, USACE national data sets; such as the Corps dams, levees, navigable waterways, etc. will be accessed through the GIS-V. Most of these data have management and programmatic information associated with them, the GIS-V will provide a powerful tool to view how the Corps serves the public and the military. By supporting the development of project and national data set databases through the GIS-V, a level of integration will be imposed on this data that we currently do not have. Environmental, military and civil programmatic information all has project location in common.

2. In addition to integrating business information, GIS provides a mechanism to organize scientific and engineering data in a way that maximizes its use. Organizing scientific and engineering data spatially can provide easy access to the data, which results in maximizing its use to support all Corps, mission areas. Data originally collected for water control can be used throughout the District office for emergency management, planning, etc. Many District offices are starting to look at managing their scientific and engineering data through a GIS and developing an Enterprise GIS systems. Successful integration of scientific and engineering data at a district office depends on having three things in place -- the use of geospatial data standards throughout the district, good communication between the districts technical GIS experts, and strong management support ensuring that data is available to everyone in the district. The Spatial Data Standards for Facilities,

Infrastructure and the Environment (SDSFIE) have been developed by the CADD/GIS Technology Center to support Enterprise GIS initiatives at district and field offices. The SDSFIE are an implementation of Federal Geographic Data Committee (FGDC) Standards. Using GIS to integrate scientific and engineering data, as with programmatic data, automatically imposes a level of integration on the data. If the data has nothing apparently in common, the spatial component or locational information ties it together.

- **Knowledge Management (KM)** is critical because today's workforce is expected to be composed of knowledgeable experts in their specialties. Further, decision makers need to have full access to the knowledge resident in the enterprise, and the enterprise must be able to rapidly impart corporate knowledge to the untrained, inexperienced members to make them more valuable and proficient. A large amount of knowledge is available to the enterprise, both within the corporate structure and from outside sources. The human capital, which is the knowledge of individuals within the enterprise, is perhaps the most valuable asset available to the enterprise. The social capital inherent in the networks, relationships, and interactions is also a valuable source of knowledge. The Corporate Capital, which is the documented information, is a final source of knowledge available to the enterprise. With this massive amount of available information, experts and decision-makers must be able to quickly sort out and access the relevant knowledge. Knowledge Management (KM) is a program initiative defined as an integrated, systematic approach to identifying, managing, and sharing all of an enterprise's information assets.
- **RMS.** The Resident Management System (RMS) is the standard Corps system for management of construction contracts. Technology Integration Branch is responsible for the technical development of the system. RMS for Windows has now been deployed in all CONUS MSC's and districts, and is being deployed in overseas districts. It complements PROMIS and the future P2 with its capabilities, by allowing construction managers and support personnel to perform all the major tasks related to administration of construction contracts and forward required information to the project management system. RMS has interfaces with CEFMS for nearly all-financial activities related to construction, and with SPECSINTACT to download submittal registers. A RMS Users' Group is now being formed, presently with one representative from each MSC and Center.

POC: MOODY K. (MK) MILES, CECW-EE, 202-761-8885

[Return to Index of Articles](#)

District of the Month

LOS ANGELES DISTRICT

On December 31, 1898, New Year's Eve, Captain James J. Meyler established his headquarters as the first District Engineer in Los Angeles for the Corps of Engineers, United States Army. He and his original staff of 18 operated out of one room of the old Central Building in downtown Los Angeles. The census of 1900 recorded 102,479 inhabitants in the City of Los Angeles and another 70,000 in Los Angeles County. With its population only 11,183 in 1880 Los Angeles had mushroomed, to abandon forever its sleepy pastoral existence. Selection as a terminus of a transcontinental railroad had destroyed the comatose existence of Los Angeles.

Long before this time, the enterprising inhabitants pushed for a deepwater harbor. Their efforts eventually produced the desired harbor, but not without an arduous struggle which deeply involved the

Corps of Engineers. The arrival of Captain Meyler signified that a deepwater harbor project for the city of Los Angeles was a reality. In line with the decentralized procedures of the Corps of Engineers and in recognition of the importance of the harbor project, the Los Angeles District came into existence. Since that time the Los Angeles District has been involved in the design, construction and operation and maintenance of a wide variety of projects and programs and has an illustrious history.

Today's Los Angeles District, with a workforce of over 700 people has one of the largest civil works and military programs in the Corps of Engineers. The District's boundaries cover Southern California, Southern Nevada and all of Arizona. The District's missions cover the full spectrum of Corps authorities including civil works design and construction, military construction, WFO/SFO construction, operations, real estate, regulatory and emergency management.

The District has several on-going civil works mega-projects. Two have had dedication ceremonies this year:



PIER 400. More than 100 years after that initial harbor project, a successful partnership between the Corps, the Port of Los Angeles and contractors have produced a project that will boost the nation's economy by expanding the capabilities of the port, already the second busiest in the United States and the ninth busiest in the world. Six years, \$401 million and 58 million cubic yards of material dredged from the Los Angeles Harbor floor all came into play to create a 590-acre landfill that is the new Pier 400 (see photo, left).

The project accomplished two goals: it deepened channels to enable the new, larger, deeper-draft cargo ships of the world to access a major port, and the dredged material was used to create the new landfill. Some 11 million tons of quarry rock were used to construct retaining dikes and protect the pier's six-mile-long perimeter. All of the rock was towed on barges from a quarry on Santa Catalina Island - located just 26 miles across the sea, according to a former pop music song.

From the harbor entrance to the north channel separating the new Pier 400 and the existing, closer-in pier 300, this channel is now 5.6 miles long and 81-feet deep. The south channel was dredged to a



depth of 75-feet, and the north channel was deepened to a 50-foot depth. The dredged material was used to complete the 590-acre landfill. The project was completed six years ahead of schedule.

SEVEN OAKS DAM. An era drew to a close for the U.S. Army Corps of Engineers on January 7, 2000 with the dedication of the Seven Oaks Dam (photo, left). The dam is probably the last large-scale dam the Corps will build in the foreseeable future. The project is a key piece of the Santa Ana River Mainstem flood control project that will provide dramatically

greater flood protection to more than three million residents and 255,000 structures in the Counties of San Bernardino, Riverside and Orange.

The official groundbreaking for the dam was in January 1991, the embankment contract was awarded to Odebrecht Contractors of California (OCC) in March 1994, and the structure reached its maximum elevation last June. More than 3.5 million hours of work went into construction and the state Occupation Safety and Healthy Department (Cal-OSHA) recognized OCC for its safety achievements in building the dam. On a national scale of 200,000 man-hours, one lost-time accident yields a score of 1.0. The national average for construction accidents is 12.3. The Corps' construction average is 1.07. OCC's average at Seven Oaks was 0.7. This was the first-ever Cal-OSHA safety award to a private contractor. In addition, for their outstanding work OCC received the USACE Civil Works Contractor of the Year for 1999.

Seven Oaks Dam extends across the upper Santa Ana Canyon 13 miles east-northeast of San Bernardino, California, and 78 miles east of Los Angeles. Rising 550 feet from the floor of the canyon, it is the 12th highest in the nation. With its 38 million cubic yards of compacted earth and rockfill, it is the 10th largest in volume in the U.S. and 25th biggest in the world.

The dam measures 2,200 feet wide at the base, narrowing to 40 feet at the top. The crest is approximately 3,000 feet long. Behind it, a flood-control reservoir is capable of holding 145,600 acre-feet at the spillway crest. The spillway, 500 feet wide and 30 feet lower than dam's crest, will direct floodwaters in excess of the 350-year event down an adjacent canyon and back into the river channel downstream. Water flowing through the 1,600-foot-long outlet works will pass through the mid-tunnel gate chamber before shooting into a downstream plunge pool to dissipate its energy.

The project includes environmental mitigation for the endangered San Bernardino Kangaroo Rat and the Santa Ana River Woolly-Star. Successful partnering was conducted with construction contractors, the California Department of Safety of Dams, regulatory agencies, and the local sponsors.

Seven Oaks Dam is just one part of the Corps' Santa Ana River Mainstem Project. The river from its headwaters in the San Bernardino Mountains to its mouth at the Pacific Ocean runs just 75 miles, but passes through nine heavily urbanized cities with valuable residential and commercial development. In semi-arid Southern California, where droughts are not uncommon, residents may not think much about a flood. In fact, though, prior to the construction of the Santa Ana River Mainstem Project, the Santa Ana River posed the greatest flood threat west of the Mississippi River.

TROPICANA-FLAMINGO, LAS VEGAS, NEVADA. Another of the District's mega-projects is the Tropicana-Flamingo flood control project. The project is located in southern Nevada, west of and through the urbanized Las Vegas area along both the Tropicana and Flamingo Washes. The area has a history of sudden, intense thunderstorms, resulting in devastating flash floods. The most recent flood occurred on July 8, 1999, and it resulted in two deaths and approximately \$20 million in damages

The Tropicana-Flamingo project provides flood control to the greater Las Vegas area by intercepting and diverting flood flows into one of four detention basins and then reducing the outflows to non-damaging rates downstream. When completed, the project will provide 100-year level of flood protection.



The project essentially consists of 4 major flood control features: The collection system (lateral collector channels) will total approximately 33 miles in length. The lateral collector system will intercept alluvial fan flows and direct them to the primary channel system. The primary channels, totaling about 28 miles, will be concrete lined and entrenched; and will deliver the flows to the detention basin system. There are 4 major detention basins in the project: 1) Red Rock Dam, 2) Flamingo Dam, 3) Tropicana Dam, and 4) Blue Diamond Dam (see photo of Blue Diamond Dam, left).

This system of basins will accept the flows from the primary channels, collect and detain them, and then release them from the Tropicana Detention Basin, the downstream-most basin in the system, at non-damaging rates of flow. The final flood control feature of this project is the system of 3 debris basins that will trap large bed loads and prevent erosion damage to the project. The debris basins are located along the base of the Blue Diamond Mountains and run generally from the north to the south.

A particularly challenging aspect of this project has been the rapid growth in the Las Vegas Valley. Preliminary project designs have required numerous modifications during the last several years as residential developments encroach into planned channel alignments. Areas, which only three years ago were desert scrub vegetated alluvial fans, are now the sites of vast residential developments.

The project includes mitigation for the endangered Desert Tortoise and for other impacted habitat. Outdoor recreation, in the form of bicycle and jogging paths, and picnic areas are envisioned to complement the flood control features of this project.

The current cost estimate for this project is \$284 million. The total project cost is comprised of approximately \$272 million in flood control costs and \$13 million in recreation costs. Construction began in September 1995 and should be completed in September 2007. The construction is based upon 13 Design Documentation Reports and which will lead to 21 different sets of construction plans and specifications. Recreation will be a single Design Documentation Report and a single construction contract.



F22 Raptor. The Los Angeles District also has a significant military construction mission. One example is the building of a new home for the F22 Raptor (photo, left). Construction is under way on a \$15.7 million contract to provide maintenance and testing facilities for F-22s based at Nellis AFB in North Las Vegas.

“The F22 is going to be the air-dominance fighter of the 21st Century, said John Haire of the Air Force Flight Test Center at Edwards AFB, California. “Called the Raptor, the plane packs a mix of maneuverability, stealth and general lethality that no other fighter in the world can equal.”

The first phase of the project is to remove asbestos and lead paint in a World War II-era hangar, and then demolish the structure to make way for the new construction. The contractor will construct a new 40,335-square-foot maintenance hangar and a 9,415- square-foot parts storage facility on the site. The contract calls for the partial demolition of two nearby buildings and renovation work to convert them into a composite fabrication shop and additional storage space.

The F-22 Aircraft Maintenance Hanger work is the second project awarded under a Multiple Award Task Order Contract (MATOC) from the Los Angeles District.

MATOC. This is a flexible-contracting tool used by the Los Angeles District to support the Corp's objective to be the premier engineering agency of the Federal Government. The MATOC allows us to provide a timely response to remediation/construction service requests in a cost effective manner.

In simple terms, a MATOC is an indefinite delivery/indefinite quantity (IDIQ) contract. What makes a MATOC different is that multiple contractors are awarded on a single solicitation. The awarded contractors then compete for individual task orders. The type of project can be MILCON, O&M, HTRW as well as Non-DOD. Task orders can be for purposes such as construction, renovation, repairs, preventative maintenance and environmental abatement. Individual task orders can range from \$100,000 to \$15,000,000. The advantages are competitive pricing, reliability, and assured quality to enable us to rapidly respond to our customers' needs.

The MATOC contractor selection process allows us to pick the best contractors. Contractors are evaluated not by lowest bid but by best value. Each potential contractor is evaluated in terms of technical skills and management experience. Then the price proposal is considered. Skills, experience, and price trade-off process determine best value. After contract awards are made, task orders may be competed between two or more contractors based on low bid or best value. Additionally, in the case of an urgent, unique, follow-on, or guaranteed minimum situation, the District has the flexibility to go to one of the contractors on a sole source basis.

Many of our traditional customers have embraced the MATOC type of contracting and this tool will allow us to be more competitive and hopefully become our customers' preferred contracting vehicle.

WE'RE RECRUITING! Los Angeles District is looking for talented engineers who want to join our Engineering and Construction teams. If you'd like to work on some exciting projects like those listed above, give us a call. Southern California is a great place to live and work and Los Angeles District has many outstanding projects yet to be designed and constructed.

**POC'S: RICHARD LEIFIELD, CESPL-ED, 213-452-3629
AND, GEORGE BEAMS, CESPL-CD, 213-452-3349**

[Return to Index of Articles](#)

Reorganization News

STATUS OF E&C MOVE

The Engineering and Construction Division staff at the Pulaski Building is busy preparing for our move to the Kingman Building. A move date of 1 November 2000 has been established. Therefore, during the week of 30 October - 3 November, the staff moving to the Kingman Building will be generally without voice communications. However, most of the staff will be checking the e-mail

periodically during the period. If you have an urgent requirement to talk with someone contact Charlie Baldi or Ray Navidi at the main headquarters, 441 "G" Street, NW.

Once the office is established in the Kingman Building, our direct mailing address will be USA Corps of Engineers, ATTN: CECW-E, 7701 Telegraph Road, Alexandria, Virginia 22315. All the members of the division at the Kingman Building will have new telephone numbers when the move is complete. An organizational listing with all the old and new telephone numbers is attached at the end of this issue of the E&C News for your use. When the new telephones are operational, the organizational listing of Engineering and Construction Division with office symbols, telephone numbers, and building location for each member of the division that is available on the Engineering and Construction Division homepage at http://www.usace.army.mil/inet/functions/cw/cecwe/eandc_phones.xls will be updated.

POC: CHARLES PEARRE, CECW-EIS, 202-761-4531

[Return to Index of Articles](#)

Update

MACHINERY ANCHORAGE FAILURE AT MEL PRICE LOCK

Back in February, St. Louis District experienced a failure of the anchorage for the machinery used to operate the lower leaf of the lift gate on the auxiliary lock chamber at Mel Price Locks and Dam. The weight of the leaf and the vertical water load cause tension on the machinery base, which caused the anchor bolts to pull out of the concrete. The bolts had smooth shanks, embedded 12 inches into the concrete, with no head or hook on the embedded end. They failed through loss of bond between the bolt and the concrete. The district made a rapid response to get the gate back in operation, then studied the cause of failure and developed a design for permanent repairs.

Original plans and specifications for this anchorage were developed by an AE. The bolts were designed for a reasonable load, and the number and size of bolts specified should have been able to carry this load. The failure occurred because no positive anchorage was required at the embedded end of the bolts. This might have been due to lack of knowledge by the designer, or might just have been an oversight by a technician who forgot to show a detail of the embedded end. (Other anchor bolts in the plans were shown with hooked ends.) In either case, the error or omission was not detected during the design and construction process.

What lessons can be learned from this incident? Designers must be careful in designing and detailing critical connections! The missing details should have been detected by the designer, or by a checker. Once the error made it past that point, it is not likely that a reviewer would have caught this type of mistake. It is even less likely that an alert construction inspector would have noticed that those anchors just did not look right. However, another element in our safety net might have saved the day – if the designer had been involved in construction inspection at the right time, the error might have been noticed.

Like the rest of the engineering profession, USACE has established procedures which are intended to prevent failures such as this. Do not be tempted to shortcut your design process, nor the checking, nor the review, nor designer visits to the construction sight. These are all part of a proven process that will minimize avoidable failures.

POC: JOSEPH P. HARTMAN, CECW-EIV, 202-761-0291

[Return to Index of Articles](#)

OUR SERVICE TO THE NATION

Over the past few months the U.S. Army Corps of Engineers has been at the center of a firestorm of controversy - critics have challenged our integrity and there has been considerable debate on the role, future and most importantly control of the Corps. This has happened from time to time throughout our long and proud history. Recent articles in newspapers have not been balanced in their coverage of the complex issues we face as the Nation's builder of navigation, flood control, environmental protection/restoration and other infrastructure works that Congress has asked us to do. These articles are recognized by many as both unbalanced reporting and agenda driven journalism. I realize that the negative coverage of the Corps and our muted response has probably caused some uneasiness for many of you as it has for me. In an effort to stem the tide of uneven reporting, we are working in conjunction and with full participation of our project sponsors, taking the initiative to provide balanced information to the public.

We expect another series of articles in the near future that will again attack the credibility and neutrality of the Corps on dredging of the nation's ports and the C&D Canal. I have no expectation that they will be any more balanced than the previous articles. We have and are continuing to provide factual information to you, the media and our partners to bring balance and perspective to the issues.

Do not be disheartened by these articles, for in truth, the controversy they spark sheds even more light on the valuable role that we fulfill. We all work for the U.S. Army Corps of Engineers for one reason: service to the Nation. We strive each day to do the right thing. Transparency is one of our strengths - we welcome the diverse opinions and thoughts of all citizens who wish to comment on what the Corps is doing or considering doing. We are "honest brokers," who deliver sound science, engineering, and economics to the political process. We have and will remain independent of politics as we pursue the challenge of balancing navigation and flood control works against the needs of public safety, the economic well being of our citizens, and our delicate environment within the intent of the law. This requires careful reasoning on our part and we remain, of all Federal Agencies, best suited to accomplish this complex task. This is confirmed as I travel through NAD's area of responsibility and come into contact with citizens who value the U.S. Army Corps of Engineers' balanced approach to the nation's complex and competing infrastructure issues.

Rest assured that both the U.S. Army Corps of Engineers and the North Atlantic Division serve our Nations and citizens well. We will continue to provide unbiased science, engineering, and economic recommendations to our elected leaders for decision. We will remain partners with other federal and state agencies, cooperating with them in developing collective judgment, as they carry out their mandates in the interests of all our citizens. The integrity of our process and the integrity of our workforce is the strength that will sustain us regardless of what is printed in the media - I will jealously protect our integrity.

Like you, I take great pride in the professionalism that is the hallmark of every member of the North Atlantic Division and the U.S. Army Corps of Engineers.

POC: BG M. STEPHEN RHOADES, CENAD-DC, 718-491-8801

(Editor's Note: This article was written as a memorandum from BG Rhoades to the team members at the North Atlantic Division office in September 2000. While he was writing to his staff the information applies to the entire Corps.)

[Return to Index of Articles](#)

FY-01 FAMILY HOUSING WORKSHOP

The U.S. Army Corps of Engineers is proud to announce a Family Housing Workshop to be held at Ft Lee, Virginia. Some of the highlights of the workshop will be discussions concerning the current revision of Technical Instruction 801-02, Family Housing, the Army's participation in the EPA's Energy Star Homes Program, Family Housing programming issues, family housing design/build procurement methodologies from the Government as well as the Contractor's point of view, family housing project success stories, Air Force and Navy perspectives on the Family Housing process, as well as a tour of the recently completed Family Housing replacement project at Ft Lee, Harrison Villa Phase I. This project is the first DoD project to achieve an Energy Star Homes certification. Guest speakers include Mr. Richard Hentz from the ACSIM's Office, Mr. Tom Sinton of Hunt Building Corporation, Mr. Bill Johnson of Actus Corporation, and Mr. David Lee of the EPA Energy Star Residential Branch.

The Workshop will be held at Ft Lee on November 14th and 15th, 2000. The program will begin at 0800 and finish between 1500 and 1600 hours each day. Space at this workshop is limited so please make your reservations early. For additional information visit our WEB site at <http://www.nao.usace.army.mil/Element.html> and select "COS Activities".

Room reservations should be made no later than November 1, 2000 by calling the Ft Lee Reservation Clerk at (804) 733-4100 or (800) 403-8533. Room rates are \$31/day with a \$5/night additional charge for each person sharing the room. Remember to have your credit card ready when you call. Upon arrival, a copy of your travel orders will be required.

Conference reservations can be made by completing the accompanying Workshop Registration form found on the web site and returning to Norfolk District by FAX (757) 441-7831 or e-mail to Peter.G.Reilly@usace.army.mil. Last day for conference registrations is October 31, 2000.

*POC'S: PETER G. REILLY, CENAO-EN-D, 757-441-7693,
AND ADRIANE B. JONES, CENAO-EN-D, 757-441-7701*

[Return to Index of Articles](#)

A PROPOSED SUSTAINABLE PROJECT RATING TOOL (SPRT)

BACKGROUND -- In a 1 May 2000 memo, the Army Chief of Staff for Installation Management (ACSIM) recently decreed that all future facilities would be designed and built according to sustainable principles. Sustainable Design and Development is the systematic consideration of current and future impacts of an activity, product, or decision on the environment, energy use, natural resources, economy, and quality of life. It is Army policy that the concept and principles of Sustainable Design and Development shall be incorporated into installation planning and infrastructure projects.

ACSIM has asked the U.S. Army Corps of Engineers (USACE) to provide technical guidance to support this initiative. The guidance will ensure that Sustainable Design and Development is considered in Army installation planning decisions and infrastructure projects to the fullest extent possible, balanced with funding constraints and customer requirements.

In working with an ACSIM/USACE Technology Coordinating Panel, the Engineer Research and Development Center has developed a rating tool that will help ACSIM, USACE, and their clients to identify and measure what are sustainable principles in each project that they develop. We call the resulting product, SPRT, for the "Sustainable Project Rating Tool." USACE intends to field SPRT with

a requirement that all Corps designers strive to achieve a 'Bronze' rating for all future projects (see below). The Army is also considering requiring sustainable development on 1391s starting year 02. It is our expectation that SPRT may become the standard for the Department of Defense (DOD).

QUEST FOR A RATING TOOL -- While there have been a number of rating tools put into practice, most of them did not reflect the reality of military installation planning, design, and construction. We investigated a wide variety of sources on the measurement and rating of sustainable qualities during the planning, design, and construction phases of building and infrastructure projects. Upon analyzing "the best of the best," we decided to adapt the Green Building Council's Leadership in Energy and Environmental Design Green Building Rating System 2.0 (LEED 2.0)TM.

LEED 2.0TM is divided into five categories: sustainable sites, water efficiency, energy and atmosphere, materials and resources, and indoor environmental quality. To these categories, SPRT adds three more: facility delivery process, current missions, and future missions. Each of these is synopsised below. We also adapted LEED 2.0TM's format of describing the intent of a measure, defining a measurable and quantifiable requirement, and offering a strategy to meet the requirement. We used applicable, equivalent military standards and regulations, where applicable.

SPRT BASICS -- The following is a synopsis of SPRT. LEED 2.0TM has been supplemented in many areas, and energy conservation has been emphasized more strongly.

Sustainable Sites (Score 20) SPRT minimizes the impact of placing a building on a site, with an eye to land use compatibility and biodiversity. It channels development to installation areas with existing infrastructure, rehabilitates damaged sites, and reduces impacts from automobile use. SPRT optimizes microclimate and minimizes effects on neighboring sites of noise, light, runoff, pollution, etc.

Water Efficiency (Score 5) SPRT minimizes the use of potable water for landscape irrigation and within the building.

Energy and Atmosphere (Score 28) SPRT ensures that buildings work as intended. It establishes energy efficiency and optimization for the base building and systems and encourages use of renewable and distributed energy systems. It reduces ozone depletion and supports early compliance with the Montreal Protocol.

Materials and Resources (Score 13) SPRT reduces waste from construction and building occupants and redirects recyclable material back to the manufacturing process. It extends the life cycle of existing building stock, in part by extending the life cycle of targeted building materials. It increases use of building products with recycled content material and of locally manufactured building products. It reduces depletion of finite raw materials and encourages environmentally responsible forest management.

Indoor Environmental Quality (IEQ) (Score 17) SPRT promotes indoor air quality (IAQ) and prevents exposure to Environmental Tobacco Smoke (ETS). It provides a high level of individual occupant control of thermal, ventilation, and lighting systems. SPRT provides a connection between indoor spaces and the outdoor environment through the introduction of sunlight and views into the occupied areas of the building. SPRT provides appropriate acoustic conditions for user privacy and comfort.

The following areas are not found in LEED 2.0™. They are designed to ensure that the delivery process is optimized to meet the needs of the present without compromising the needs of the future.

Facility Delivery Process (Score 7) SPRT delivers a facility that optimizes tradeoffs among sustainability, first costs, life cycle costs and mission requirements. It assures that the delivery process assures efficient operation and maintenance of the facility.

Current Mission (Score 6) SPRT assures that the delivery process establishes efficient operation and maintenance of the facility. It provides a high-quality, functional, healthy, and safe work environment to promote soldier and workforce productivity and retention.

Future Missions (Score 4) SPRT requires an understanding of: (1) The typical or likely lifespan of the function to be accommodated by the facility in order to recognize how soon the facility should be expected to adapt to a different use; and (2) The life spans of the building systems to understand when they will need to be updated during the lifespan of the facility and to design the facility in a manner that facilitates the updating of each system. It requires design of the facility to maximize accommodation of future uses. The greater the future flexibility, the less likely it is that the facility will become a source for waste materials, or that it will require additional materials.

SPRT Certification Levels

SPRT Bronze -- 25 to 34 Points

SPRT Silver -- 35 to 49 Points

SPRT Gold -- 50 to 74 Points

SPRT Platinum -- 75+ Points

THE SPRT PRODUCT -- SPRT is designed to be an easy-to-understand EXCEL worksheet that will allow self-scoring by building delivery teams and their members, either during the charrette process or by an independent panel.

*POC'S: STEPHEN N. FLANDERS, CEERD-RR, 603-646-4302,
DONALD F. FOURNIER, CEERD-CF-E, 217-373-7282,
RICHARD L. SCHNEIDER, CEERD-CN-E, 217-398-5424,
ANNETTE L. STUMPF, CEERD-CF-N, 217-352-6511,
HARRY GORADIA, CECW-ETE, 703-428-6460,
DAVID BOHL, CECW-EWS, 202-761-1497,
AND JOHN SCHARL, DAIM-FDF-M, 703-428-7614*

[Return to Index of Articles](#)

CONSTRUCTION MANAGEMENT IN EXCELLENCE AND HARD HAT OF THE YEAR AWARDS

Each year the MSC's and Centers nominate and select recipients for both of these USACE awards based on their outstanding contributions to Military and Civil Works construction and quality management (including environmental remediation) programs during the previous calendar year. This year's awardees have all made significant contributions to the construction function and the overall Project Management Business Process. The awardees are:

<u>MSC/Center</u>	<u>Construction Management in Excellence</u>	<u>Hard Hat of the Year</u>
CEMVD	Stephen C. Frank	Thomas D. Barickman
CENAD	Fernando (Fred) A. Angelelli	Kevin D. Arthur

CESWD	Kenneth A. Atchinson	Steven R. Rous
CESPD	Julie A. Martinez	Tim H. Willard
CEPOD	Gerald D. Young	Keith (Skip) E. Landerman
CEHNC	Hoyet R. Holder	William T. Jennings
CELRD	Kirk P. Dailey	Donald R. Bell
CENWD	Larry C. Irvin	Nicola (Nick) L. Porreco
CESAD	Jimmy D. Stevens	Isaiah T. Hill

In addition to these awards two National Awards will be given to those awardees selected by a SES review panel from the list above. The winners for these awards are Julie A. Martinez (CESPL) for the Construction Management in Excellence Award and Tim H. Willard (CESPK) for the HardHat of the Year Award. These are new awards which will be presented at the Senior Leaders Conference in Norfolk, Virginia in late October. We would like to congratulate all awardees for their exceptional service, performance and contributions to the Corps.

POC: BRADLEY JAMES, CECW-ETC, 202-761-1419

[Return to Index of Articles](#)

CONTRACTOR OF THE YEAR AWARDS

On 8 August 2000, Major General Fuhrman, Acting Commander, approved the selection of both the Civil Works and Military Programs Contractor of the Year Awards. The Civil Works Contractor of the Year selection is Odebrecht Contractors of California nominated by Los Angeles District. The Military Programs Contractor of the Year selection is Hensel Phelps Construction Company nominated by Omaha District. Odebrecht was nominated for their exceptional performance during the construction of the Seven Oaks Dam and Appurtenances, San Bernardino County, California. Hensel Phelps was nominated for their exceptional performance during the construction of the Satellite Control and Technical Support Facility at Schriever AFB, Colorado. Both contractors were acknowledged for their aggressive safety programs, effective management, outstanding quality and timely completion of their projects. The actual awards will be given at the Senior Leaders Conference Award Dinner at the end of October.

POC: BRADLEY JAMES, CECW-ETC, 202-761-1419

[Return to Index of Articles](#)

WORKSHOP ON SEISMIC EVALUATION AND REHABILITATION OF CIVIL WORKS INFRASTRUCTURE

A Corps of Engineers sponsored workshop on Seismic Evaluation and Rehabilitation of Civil Works Infrastructure (SERCI) is scheduled for 14-16 November 2000 at the Red Lion Inn, Arden Way, Sacramento, California. The purpose of this workshop is to (a) share districts' experiences on evaluation and rehabilitation of embankment and concrete dams and their appurtenant structures, (b) share the results of the on-going Earthquake Engineering Research Program, and (c) identify field needs for SERCI. Results of this workshop will be used to define and prioritize a new Research and Development (R&D) effort to develop innovative and economical rehabilitation alternatives for seismically deficient dams and reservoir control structures. This three-day workshop will consist of technical presentations followed by breakout sessions for identifying R&D needs. In conjunction with this workshop, an Earthquake Ground Motion Analysis System demonstration and training session will be offered on 13 November 2000.

You are strongly encouraged to send representatives from the MSC's and Districts to participate in this workshop. Structural Engineers, Geotechnical Engineers, Geologists, Dam Safety Program Managers,

and construction team members will benefit from this workshop. Please send the names of participants by email to Mr. Bruce Riley at bruce.c.riley@hq02.usace.army.mil no later than 27 October 2000.

*POC'S: BRUCE RILEY, CECW-EWW, 202-761-8597
AND TONY LIU, CERD-ZC, 202-761-0222*

[Return to Index of Articles](#)

Dam Safety

DAM SAFETY 2000 AND CORPS OF ENGINEERS DAM SAFETY MEETING

The 17th Annual Conference of the Association of State Dam Safety Officials conference, Dam Safety 2000, was held at the Westin Providence and the adjoining Rhode Island Convention Center, 25-30 September 2000. Over 60 team members from across the Corps of Engineers attended the conference. The technical sessions included presentations on dam decommissioning, dam rehabilitation, and dam inspections. Corps of Engineers personnel presented five presentations.

District and Division Dam Safety Coordinators as well as five Dam Safety Officers met on September 26-27 to learn about the latest policy and procedures effecting Dam Safety within the Corps of Engineers. A number of Corps personnel also attend a pre-conference technical seminar on stability analysis.

The week provided a well-rounded opportunity to meet other Corps personnel and other Dam Safety industry representatives. All personnel interested in Dam Safety should mark their calendars for Dam Safety 2001 to be held at Snowbird Resort, Utah, and September 9-15, 2001.

POC: CHARLES PEARRE, CECW-EIS, 202-761-4531

[Return to Index of Articles](#)

USCOLD CALL FOR PAPERS

The 21st United States Committee on Large Dams (USCOLD) annual meeting and lecture will be held in Denver, Colorado, July 30 through August 3, 2001. The USCOLD Committee on Construction and Rehabilitation will organize the lecture, with support from the Committee on Dam Decommissioning and the Committee on Environmental Effects. The Bureau of Reclamation will be the host for the annual meeting. The theme of the lecture will be "The Future of Dams and Their Reservoirs". USCOLD invites USCOLD members and other water resources professionals to submit abstracts of papers related to the theme. The abstracts should be 200 to 400 words and should be submitted not later than November 1, 2000. Additional information on the call for papers and submitting abstracts is available at <http://www.uscold.org/~uscold/ld01call.html>.

POC: ART WALZ, CECW-EWW, 202-761-8681

[Return to Index of Articles](#)

DAM SAFETY WORK GROUP

The new Dam Safety Work Group held its first meeting during Dam Safety 2000. The work group selected Robert Fulton from South Atlantic Division as its first chairman. The initial efforts for the work group will be establishing its charter, assisting with the Dam Safety Peer Review, and providing input to the revisions of the Safety of Dams guidance documents.

POC: CHARLES PEARRE, CECW-EIS, 202-761-4531

[Return to Index of Articles](#)

Information

CONSTRUCTION WARRANTY INITIATIVE

The Headquarters of the Army Corps of Engineers has completed actions to do with our initiative to improve performance on warranty. This is the culmination of the efforts of a process action team developing recommendations to improve the warranty process, and followed by an implementation team which carried the recommendations into establishing final policy.

The primary thrust of the policy was to establish the roles and responsibilities of the customer/user and the Corps, and to make it clear to the construction contractor what was expected of him contractually with respect to warranty. It was felt that three main items were necessary for an improvement in warranty performance. The customer had to know his responsibilities, the Corps had to follow through on its required actions, and finally the contractor had to understand what was required contractually.

The revised Engineer Regulation, ER 415-345-38, on the subject contains a sample generic memorandum of understanding between the Corps and its customers to outline the roles and responsibilities of the parties. Of particular importance was the coordination during the planning and design phase of the project when the options for warranty were presented to the user so that expectations were established. As specified in the regulation, four and nine month joint warranty inspections follow project turnover and are particularly important, because the systematic identification and correction of warranty problems during the one-year construction warranty period insures proper disposition of the deficiencies by the contractor.

Secondly, a Corps of Engineers Guide Specification, CEGS-0178, was written and distributed covering various deliverables to do with warranty. Of note were the warranty response times to be specified for the contractor to respond to calls by the customer during the one-year construction warranty period, and based on the criticality of the operation of various facilities types.

The policy guidance has been distributed throughout the Corps for implementation, and for coordination with all project customers. The follow on action for the Corps is to apply the guidance to all projects and to insure that customers understand the implications of the construction warranty provisions contained in the contract documents, as well as their responsibilities during project development, construction, and following acceptance of the facility.

POC: JEFF P. KRULL, CECW-ETC, 202-761-1443

[Return to Index of Articles](#)

JOB VACANCIES

Six vacancies are highlighted here for the information of our readers.

The Chicago District is currently recruiting for three civil engineers, GS-810-11, in the Design Branch, Civil Design Section, and two Coastal Engineers, one GS-810-9/11 and one GS-810-12, in the Hydraulic and Environmental Engineering Branch, Hydraulics Section. Your assistance is requested to insure maximum distribution of this announcement to your staff who may be interested in these opportunities. The duties for the civil design positions include overall design of Civil Works projects, design coordination within Engineering Division, preparation of plans and specifications, design and

layout of project features, grading plan development, quantity takeoff preparation, identification of real estate requirements and AE contract administration. The duties for the coastal engineering positions include analysis, design and coordination of coastal projects within the Chicago District. Specific coastal activities include definition of the wave and storm data requirements, preparation of erosion and sediment transport studies, determination of wave heights and frequencies, computation of design parameters for coastal structures, report preparation and AE contract administration. Projects include flood control, environmental remediation, shoreline protection, navigation and coastal structures and support for other agencies. Candidates must have good communication skills and a desire to learn. For the civil design positions, CADD experience a plus. For the GS-810-12 coastal engineering position, team leader or project management experience a plus. Looking for people who can become leaders in the Corps of Engineers. For more information regarding the civil design positions, contact [Mr. Joseph Schmidt](#) (312) 353-6400, ext. 3060, or for the coastal engineering positions contact [Mr. Thomas Fogarty](#) (312) 353-6400, ext. 3100. Further information regarding the District's program can be obtained from the District's webpage: <http://www.lrc.usace.army.mil/>

The New Orleans District is actively recruiting for a Supervisory Hydraulic Engineer, GS-810-14 for our Engineering Division, Hydraulics and Hydrologic Branch. The vacancy announcement may be viewed on the internet at <http://www.cpol.army.mil>, Stairs Recruitment Notice Number: S00GY064304DKH. This position is located in New Orleans, Louisiana. New Orleans is a city of colorful historical background. It is also a major industrial center, the largest U.S. port in tonnage handled, and the center of an area rich in natural resources ranging from oil to seafood. The city's position between Lake Pontchartrain and the Mississippi River dictates a climate of moderate temperatures, high humidity and heavy rainfall. Living costs are moderate, although real estate prices are high. There are no local personal or corporate income taxes. The state corporate income tax rate is competitive with most other southern states, ranging from 2 - 6 percent. Total state and local sales taxes in the area are among the lowest of the nation's major cities. Among the city's amenities are six major university, a number of colleges, opera, symphony, and jazz organizations, the historic French Quarter, Mardi Gras, Jazz Fest, museums, parks, sports facilities, a world-class zoo and aquarium, airports, rail terminals, and a unique cuisine. Riverboat gambling began operations in 1994. The district is housed in modern office buildings along the Mississippi River. The grounds offer a park-like environment with secure parking at no cost. Point of Contact for the vacancy is Linda Champagne, (504) 862-2795.

*POC'S: JOSEPH JACOBazzi, CELRC-ED, 312-353-6400,
AND GERARD S. SATTERLEE, CEMVN, 504-862-1000*

[Return to Index of Articles](#)

MISSISSIPPI RIVER CHANNEL IMPROVEMENT FEATURES PROVE EFFECTIVE IN KEEPING NAVIGATION CHANNEL OPEN DURING 1999 - 2000 LOW WATER

The Mississippi River has long been a major contributor to the physical and economic development of our nation. However, at the time that the United States was first settled, the Mississippi River was a natural alluvial stream characterized by a wide, shallow channel, numerous shifting sandbars, and large fluctuations in stage. The river was active and freely meandered across its floodplain. In this natural state, the river could not provide a dependable channel to meet the nation's commercial navigation needs nor could it provide for the efficient passing of flood flows.

To meet both navigation and flood control needs, a dependable, low maintenance channel had to be developed. Initially, dredging was conducted to provide adequate depths for navigation and levees were constructed to ease flooding problems. However, these measures alone proved ineffective. Then

in 1927, a great flood devastated the entire lower Mississippi River Valley. As a result of this flood, Congress passed the Flood Control Act of 1928. This legislation authorized the U. S. Army Corps of Engineers to develop a system of flood control and navigation improvements for the lower Mississippi River. To provide an efficient navigation channel, the banks of the river had to be held in place. The Corps of Engineers initiated a comprehensive bank stabilization program to meet this need. The use of a revetment consisting of articulated concrete mattress (ACM) on the lower bank in conjunction with stone paving on the upper bank has proved to be most effective in controlling the erosion of the river's banks. Through 1999, over 284 miles of revetment have been constructed within the Vicksburg District. However, revetment alone was not sufficient to provide a low maintenance navigation channel. During periods of low water, substantial dredging was required to maintain adequate channel depths. As a result of this continued dredging, a system of rock dikes was developed to provide adequate depths through trouble reaches. As of 1999, over 270 dikes totaling almost 115 miles have been constructed within the Vicksburg District. The channel improvement works, that are now approximately 90 percent complete, have greatly reduced the expensive dredging requirements. Dredging within the Vicksburg District is now only required in isolated problem reaches.

During the late spring and early summer of 1999, a moderate to severe drought began in the lower Mississippi River and the Ohio River valleys. This drought continued to impact stages during the fall of 1999. As a result, stages on the lower Mississippi River within the Vicksburg District were extremely low. Stages throughout the District during the fall of 1999 approached the extreme low water of 1988. The minimum stage observed at Vicksburg for the months of October and November was the lowest since 1988. The minimum stage for the month of December was the lowest since 1963. At Arkansas City, the minimum stage for the month of November tied the all-time record low stage for that month. As a result of the drought, extreme low stages on the Mississippi River extended on into February 2000. Stages throughout the Vicksburg District approached the lowest stages ever recorded for the month of February with the stage at Arkansas City setting an all-time record low stage for that month.

During the extended period of low water during 1999 and 2000, the navigation channel remained open primarily due to the effectiveness of the channel improvement structures built on the river. Compared to the previous extreme low water in 1988, dredging within the Vicksburg District was reduced from a total of 77 days at 8 locations to a total of 31 days at 6 locations. The total quantity of material dredged was reduced from almost 3.2 million cubic yards to just over half that amount in 1999 and 2000 combined. Much of this reduction can be attributed to the additional dike construction completed since 1988. In that year, 75 miles of dikes had been constructed. By 1999, over almost 115 miles of dikes had been completed. Even with the success of keeping river traffic moving on the Mississippi River during the extreme low water of 1999 and 2000, additional work remains to be done. With continued construction of the remaining planned channel improvement structures and continued maintenance of existing structures, an efficient navigation channel will be provided on the Mississippi River for decades to come.

POC: BOBBY L. FLEMING, CEMVK-ED, 601-631-5475

[Return to Index of Articles](#)

KEYS TO KNOWLEDGE MANAGMENT

There are three keys to a Knowledge Management (KM) program. The enterprise must know what it needs to know; have the tools to access the relevant knowledge (human, social and corporate) and have a process to provide the knowledge to those who need it. To this end, HQUSACE is working toward a corporate approach to getting information required for decisions from all parts of the enterprise. A

working group with representatives from Civil Works (CECW), Corporate Information (CECI), Military Programs (CEMP), Research and Development (CERD), Engineering Research and Development Center (ERDC), Human Resources (CEHR) and Great Lakes and Ohio River Division (CELRD) has been formed to focus on putting a KM program in place. CERD and CECI have developed a draft KM strategic plan. The Installation Support Division in CEMP has had significant input as a result of their initiative to develop a KM portal for the USACE Installation Support Offices. The CADD/GIS Technology Center at the Waterways Experiment Station has developed the Foundation Knowledge Portal, which NAVFAC is using for the facilities management of Navy bases. Recently, CELRD sponsored a week long KM workshop. The USACE Office of Council has a “legal” KM system under development. The working group’s task is to develop an integrated, coordinated approach from these individual initiatives for a USACE KM program. Additionally, Technology Integration Branch will look at the myriad of corporate data systems with KM potential, e.g., the Registry of Skills (RoS); OMBIL; PPDS; EDMS; Corps Lessons Learned (CLL) System; Land Management System Delivery Framework; Links to USACE Electronic Libraries & Commercial Subscriptions services; CorpsWeb Catalog; Desktop VTC; and the USACE Virtual Campus just to name a few. Actions accomplished to date are as follows:

- The USACE CIO has provided a “KM Tool” briefing to the Senior Management Board.
- The CADD/GIS Technology Center Board of Directors has endorsed a KM role for ITL as a result of the “Foundation Knowledge” work.
- The role a KM initiative has in professional development will be incorporated into the program as a result of investigation of the NAVFAC E-NET and Foundation Knowledge initiative.
- The final draft KM Strategic Plan is out for review.
- Senior USACE personnel have attended a 1 day KM symposium from the Gartner Group.
- The SMB has agreed to establish a KM Steering Group and has discussed the establishment of a "Chief Knowledge Officer" for USACE.
- The USACE CIO is planning to host a KM Tool Requirements Definition/ Knowledge Mapping Workshop.

These efforts are in concert with Army and other DOD and Federal efforts such as "Army Knowledge Online", the Navy’s “Knowledge Centric Organization”, the National Performance Review’s recently announced FirstGov.GOV and NAVFAC's facilities management “Foundation Knowledge”.

POC: JACK BICKLEY, CECW-EE, 202-761-8892

[Return to Index of Articles](#)

UPCOMING CHANGES IN RMS

The next version of RMS, 2.26, will be released in mid-October. Among its major features are the Foreign Currency Module for use in overseas districts, and the interface to PROMIS to permit reporting of data to project managers. This version also has improved access control, submittal and transmittal linkage, work projection capability, and ease of copying information from one contract to the next. A correspondence tracking module and many of the form letters and reports desired by RMS users are included. In addition, a new RMS Users' Guide is available which includes detailed explanations of various RMS and construction business processes, together with the related data flow.

Additions planned for the November release include the interface with SPS/PD2, a Contractor QC module and more form letters and report output capabilities.

Future releases will include a DD Form 1354 real property transfer document , a stand-alone QA module for use by construction field office personnel, a designer/A-E module, and dredging forms as well as related QA/QC data to handle the requirements of districts which perform this type of work.

A RMS Users' Group is now being formed, presently with one representative from each MSC and Center. An initial meeting and visit to the RMS Center are planned for the week of 5 December. More details will be provided later to MSC RMS managers.

POC'S: BRADLEY JAMES, CECW-ETC, 202-761-0645

[Return to Index of Articles](#)

PARTNERING WITH ACIL

A partnering meeting was held 13-14 September 2000 at the Waterways Experiment Station with the American Council of Independent Laboratories (ACIL). ACIL is a trade association of all major commercial laboratories with over 400 members in the U.S. This was the first meeting since the signing of Partnering Agreement in May 00. The purposes of the meeting were to explore possible improvement in quality control of QA/QC labs and to promote communication, understanding, and cooperation between USACE and ACIL. Many issues were raised during the discussions in the areas of construction materials and chemistry testing. More working sessions are planned in the next few months to work on those issues. In general, the meeting was successful and will have a positive impact in the control of laboratory quality.

POC'S: M. K. LEE, CECW-EIV, 202-761-0412

[Return to Index of Articles](#)

NEW FACILITIES ACQUISITION CAREER FIELD

On 15 September 2000 Dr. Get Moy, Chief Civilian Engineer at NAVFAC, and other staff members briefed several USACE senior civilians from on a proposal to create a new DoD acquisition career field (ACF) for facilities. The new ACF would encompass all functions that deal with facilities from acquisition to disposal, with the exception of contracting which is already a separate ACF. The facilities ACF will be chartered under the existing Defense Acquisition Workforce Improvements Act structure and will take at least the next year to fully implement based on previous experience from other ACF's. NAVFAC has full support of the Navy Director of Acquisition Career Management and wants to approach DoD with a unified tri-service front. The next critical date will be 11 October 2000 when the Engineer Senior Executive Panel meets to sign a tri-service letter to DoD. Dwight Beranek has been delegated authority to sign for USACE after a full staffing among the various HQUSACE stakeholders.

POC'S: MARK GRAMMER, CECW-ETC, 202-761-4127

[Return to Index of Articles](#)

Training

HYDROLOGY AND DAM SAFETY: DAM FAILURES, FLOODS, AND SPILLWAY ADEQUACY

The Association of State Dam Safety Officials (ASDSO) will conducted its 2000 Midwest Region Technical Seminar at the Holiday Inn City Center, 213 West Washington Street, South Bend, Indiana,

on 16 and 17 November 2000. The seminar will cover hydrologic analysis methods and parameters and dam failure analysis. The cost of the seminar is \$100 for ASDSO members and \$125 for non-members. Registrations are due at ASDSO by 10 November 2000. More information on the seminar can be obtained from Susan Sorrel at 859-257-5146. The registration form available on the ASDSO web site at http://www.damsafety.org/reg_tech_sem.html maybe used to register for this seminar.

POC'S: CHARLES PEARRE, CEMP-EIS, 202-761-4531

[Return to Index of Articles](#)

HQUSACE OFFERS SUSTAINABLE DESIGN AND DEVELOPMENT (SDD) TRAINING

In the last few years, we have seen a renewed emphasis on sustainable design and development (SDD) within the federal government. Recent Executive Orders, DOD, Army and USACE policies require us to adopt its principles. To help instill the concepts of SDD, we have updated much of our technical criteria. In addition, we have developed an SDD training workshop, which we conducted at Omaha, Sacramento, Savannah and Seattle Districts from June through August. Future training dates are provided in the schedule below.

Today's sustainable design and development (SDD) incorporates the energy concerns of the 1970s with the new concerns of the 1990s. This includes:

- Damage to the natural environment.
- Emissions of greenhouse gases and ozone depleting chemicals.
- Use of limited material resources.
- Management of water as a limited resource.
- Reductions in waste.
- Indoor environmental quality.
- Occupant/worker health, productivity and satisfaction.

Here are some comments about the training taken from the course evaluations:

"We had 30+ participants at the SAS session, with approximately half of those being from installations and MACOMs/MAJCOMs. The diversity of the group made for interesting discussions, and ensures that all programmers, project managers, and designers will understand the need and merits of this initiative."

"During the instruction, there were times when we were split up into teams to work on solutions to a case study. In those instances, it was good to have a cross section of varied experiences and disciplines on your team to come up with team solutions/output."

"The information regarding the Green Building Council's rating system is probably the most important to be gained from the course. And, when CERL gets the militarized version disseminated throughout the Army and Corps, it will make the task much easier."

HQUSACE will present scheduled SDD Training at the following locations:

DISTRICTS	DATES	POC
Fort Worth, TX	17-19 Oct 00	Jimmy Baggett, 817-978-2054 x 1
Louisville, KY	24-26 Oct 00	Doug Pohl, 502-582-5788
Mobile, AL	7-9 Nov 00	Michael Thompson, 334-690-2709
Honolulu, HI	7-9 Nov 00	Russell Uyeno, 808-438-8511
Tulsa, OK	14-16 Nov 00	Kerry Ingram, 918-669-7004

Korea /Japan	14-16 Nov 00	Jack Giefer, 011-822-2270-7677
New York, NY	28-30 Nov 00	Richard Wright, 212-264-9217
Kansas City, KS	9-11 Jan 01	John Bourdo, 816-983-3236
Baltimore, MD	TBD Jan-Mar 01	Pete Rossbach, 410-962-3845
Norfolk, VA	TBD Jan-Mar 01	Terry Deglando, 757-441-7702
Albuquerque, NM	TBD Jan-Mar 01	TBD
Alaska	TBD Jan-Mar 01	Scott Bearden, 907-753-5770
Europe	TBD Jan-Mar 01	TBD

These workshops are for USACE Districts and MACOM/installation personnel. USACE Districts should inform their customers of these workshops.

*POC'S: HARRY GORADIA, CEMP-ET, 703-428-6460,
DAVID BOHL, CECW-EWS, 202-761-1497,
AND JOHN SCHARL, DAIM-FDF-M, 703-428-7614*

[Return to Index of Articles](#)

Value Engineering

BARRACKS VALUE ENGINEERING/MANAGEMENT

Engineering and Construction, Southwestern Division, is collecting a list of VE/VM - A/E contractors, nation-wide, which might be utilized to review problem FY00 barracks projects, and all FY01 barracks projects. All MSC's were asked to furnish potential A/E to CESWD by 29 September. Their objective is to have a delivery order prepared by mid-October.

Barracks cost problems were the topic of a 21 September 2000 meeting between HQUSACE and ACSIM representatives. The course of action subsequently directed by the Acting DCG MP is for HQ VE/VM Office to hire an independent VE-A/E contractor to review all FY01 projects, and non-awarded problem FY00 projects. The contractor will make recommendations to CEMP for directed, district implementation.

POC: MICHAEL HOLT, CECW-EV, 202-761-8738

[Return to Index of Articles](#)

Open Discussion and Comments

RESPONSE TO PMBP ARTICLE

The following response was received from the field to COL Schmitt's article "**PMBP has no 'Second-class Citizens'**" that was in the September issue of the E&C News.

Field Response: "Charles, I read the News, especially COL Schmitt's writup on "Second Class Citizens." I know that everyone TALKS that the technical elements are not second class to Project Management; however, actions speak much louder than words. In my district during the past 20 or so months there have been 8 or more GS12s in PPMD non-competively promoted to GS13. All were hired into GS12 positions that listed no promotional potential. We have zero technical GS13 positions in the technical areas. Again, actions speak much louder than words. We are also losing senior technical personnel to a higher graded NRCS and EPA on a very regular basis. Their working grade is

a GS13 or 14. There is no wonder that we are not able to retain our technical personnel. Life in the field."

POC: CHARLES PEARRE, CECW-EIS, 202-761-4531

[Return to Index of Articles](#)

LESSONS LEARNED SYSTEM

Question: Do we have a working/functional "lessons learned" system in the Corps yet?

Reply: A Corporate Lessons Learned (CLL) prototype is currently being tested at 11 Corps' Districts, in the design quality arena through a link from the Design Review and Checking System (DrChecks). A simplified registry connects the District's lessons learned repository with the Whole Barracks Renewal (WBR) Lessons Learned National Repository.

Modifications of the prototype repository and registry to fully supports Corporate Information Management requirements is the first step of implementing the CLL to other business areas. Once the robust design has been completed, additional high-payoff business areas will be identified. Support for CLL will then be provided in updates of existing Automated Information Systems or through stand-alone national lessons learned repositories.

For additional information on CLL contact Deane E. Holt in Information Technology Services Division (CECI-T) at 202-761-5982.

POC: CHARLES PEARRE, CECW-EIS, 202-761-4531

[Return to Index of Articles](#)

(Editors' note: If you want to share your thoughts with our readers regarding a subject of general interest, send an email to the E&C News editor at charles.pearre@usace.army.mil. A synopsis of your comments will be published next time).

Editors' Notes

SUBSCRIBE TO ECNEWS

Engineering and Construction News uses a subscription list on the Corps List Server. The name of the list is LS-ECNEWS. The purpose of the list is to distribute the Engineering and Construction community newsletter, *Engineering and Construction News*.

You can subscribe or unsubscribe to LS-ECNEWS by sending an e-mail message to majordomo@usace.army.mil with no subject line and only a single line of text in the message body. That single line of text should have the following format: **subscribe ls-ecnews** or **unsubscribe ls-ecnews**. The List Server system will automatically pick up your originating e-mail address from the message and add it to or delete it from the distribution list.

If you have any questions about the list server, see the List Server E-Mail Delivery System web page at <http://eml01.usace.army.mil/other/listserv.html>. Or you may contact Charles Pearre if you have additional questions on the subscription list.

POC: CHARLES PEARRE, CECW-EIS, 202-761-4531

[Return to Index of Articles](#)

New Telephone List

NEW TELEPHONE NUMBERS FOR ENGINEERING AND CONSTRUCTION DIVISION

With the move to the Kingman Building, the main numbers for Engineering and Construction Division will change to 703-428-XXXX. This change will take effect on or about 2 November 2000. The following organizational list shows both the current and the new telephone numbers for all members of the division.

CECW-E (Engineering and Construction Division)

Name	Office Symbol	Current Telephone	New Telephone	Building
-------------	--------------------------	------------------------------	--------------------------	-----------------

ENGINEERING & CONSTRUCTION DIVISION OFFICE

Dwight A Beranek	CECW-E	202-761-4439	703-428-7302	Kingman
		202-761-8826	202-761-8826	GAO
Donald R Dressler	CECW-E	202-761-8501	703-428-7304	Kingman
Lisa J Rich	CECW-E	202-761-4229	202-761-4229	GAO
Joanne L Sanford	CECW-E	202-761-4538	703-428-7300	Kingman
Sharon Edmonds	CECW-E	202-761-4240	202-761-4240	GAO

SPECIAL ASSISTANTS

Charlie Baldi	CECW-E	202-761-4239	202-761-4239	GAO
Ray G Navidi	CECW-E	202-761-4238	202-761-4238	GAO

CHIEF ARCHITECT

Lawrence P Delaney	CECW-E	202-761-1545	703-428-7220	Kingman
--------------------	--------	--------------	--------------	---------

VALUE ENGINEER

Michael P Holt	CECW-EV	202-761-8738	703-408-6930	Kingman
Jeffery T Hooghouse	CECW-EV	202-761-1069	703-428-7246	Kingman

TECHNOLOGY INTEGRATION BRANCH

Moody K Miles, Branch Chief	CECW-EE	202-761-8885	703-428-6978	Kingman
Jack Bickley	CECW-EE	202-761-8892	703-428-6974	Kingman
Nancy J Blyler	CECW-EE	202-761-8893	703-428-6973	Kingman
Karl P Klonowski	CECW-EE	202-761-0645	703-428-6956	Kingman
John R Lanzarone	CECW-EE	202-761-8634	703-428-7322	Kingman
Jean A McGinn	CECW-EE	202-761-1052	703-428-7320	Kingman

INFRASTRUCTURE BRANCH

Roy E Braden, Branch Chief	CECW-EI	202-761-1495	703-428-6933	Kingman
Lorraine D Langley	CECW-EI	202-761-4528	703-428-7301	Kingman

COST & ECONOMIC TEAM

Vacant, Team Leader	CECW-EIC		703-428-6997	Kingman
Patricia L Bashandi	CECW-EIC	202-761-0425	703-428-6999	Kingman
Miguel D Jumilla	CECW-EIC	202-761-1359	703-428-6974	Kingman
Raymond L Lynn	CECW-EIC	202-761-1242	703-428-6994	Kingman
Donna R Smigel	CECW-EIC	202-761-0336	703-428-6073	Kingman
Robert T Wong	CECW-EIC	202-761-1241	703-428-7039	Kingman

SYSTEM ENGINEERING TEAM

Jerry L Foster, Team Leader	CECW-EIS	202-761-8676	703-428-7339	Kingman
Charles M Pearre	CECW-EIS	202-761-4531	703-428-7343	Kingman
Gerald J Steele	CECW-EIS	202-761-8898	703-428-7338	Kingman
Paul C Tan	CECW-EIS	202-761-8671	703-428-7340	Kingman
Andy A Wu	CECW-EIS	202-761-8614	703-428-7342	Kingman

BUILDING SYSTEM TEAM

Joseph P Hartman, Team Leader	CECW-EIV	202-761-0291	703-428-7344	Kingman
Amitava Ghosh	CECW-EIV	202-761-8603	703-428-7007	Kingman
Meng K Lee	CECW-EIV	202-761-0412	703-428-7345	Kingman
Frank A Norcross	CECW-EIV	202-761-0881	703-428-7018	Kingman
Albert Young	CECW-EIV	202-761-0435	703-428-7036	Kingman
Vacant	CECW-EIV		703-428-7037	Kingman

TECHNICAL POLICY BRANCH

Hari N Singh, Branch Chief	CECW-ET	202-761-4034	703-428-6843	Kingman
Marie A Roberson	CECW-ET	703-428-6428	703-428-6428	Kingman

CONSTRUCTION TEAM

Robert W Chesi, Team Leader	CECW-ETC	202-761-0827	703-428-7283	Kingman
Bobbie J Dansberry	CECW-ETC	202-761-0651	703-428-7333	Kingman
Mark Grammer	CECW-ETC	202-761-4127	202-761-4127	GAO
Bradley M James	CECW-ETC	202-761-1419	703-428-7279	Kingman
Jeff P Krull	CECW-ETC	202-761-1443	703-428-7296	Kingman
Walt Norko	CECW-ETC	202-761-1265	703-428-7280	Kingman
Charles W Racine	CECW-ETC	202-761-4351	703-428-7346	Kingman
Terry Wilford	CECW-ETC	202-761-8652	703-428-7284	Kingman

ENGINEERING TEAM

Joe A Mccarty, Team Leader	CECW-ETE	202-761-8619	703-428-7266	Kingman
Robert B Billmyre	CECW-ETE	202-761-4228	202-761-4228	GAO
Daniel J Casapulla	CECW-ETE	202-761-4535	703-428-7258	Kingman
Rick D Dahnke	CECW-ETE	202-761-4125	202-761-4125	GAO
Robert M Diangelo	CECW-ETE	202-761-4803	703-428-7263	Kingman
Donald R Evick	CECW-ETE	202-761-4227	202-761-4227	GAO
Harry Goradia	CECW-ETE	703-428-6460	703-428-6460	Kingman
Robert A Fite	CECW-ETE	202-761-8626	703-428-7248	Kingman

ENVIRONMENTAL TEAM

James W Wolcott, Team Leader	CECW-ETV	202-761-1200	703-428-7334	Kingman
Pete Juhle	CECW-ETV	202-761-4242	202-761-4242	GAO
Michael J Klosterman	CECW-ETV	202-761-8682	703-428-7337	Kingman
Donna R Kuroda	CECW-ETV	202-761-4335	703-428-7269	Kingman
Dale H Otterness	CECW-ETV	202-761-8621	703-428-7299	Kingman
Bruce R Wallace	CECW-ETV	202-761-8890	703-428-7335	Kingman

WATER RESOURCE BRANCH

Earl E Eiker, Branch Chief	CECW-EW	202-761-8500	703-428-7040	Kingman
----------------------------	---------	--------------	--------------	---------

SITE DEVELOPMENT TEAM

Arthur H Walz, Team Leader	CECW-EWS	202-761-8681	703-428-7180	Kingman
David C Bohl	CECW-EWS	202-761-1497	703-428-7121	Kingman
Jim I Chang	CECW-EWS	202-761-0419	703-428-7151	Kingman
Mike Dean	CECW-EWS	202-761-1499	703-428-7175	Kingman
Gregory W Hughes	CECW-EWS	202-761-4140	703-428-7130	Kingman
Bruce C Riley	CECW-EWS	202-761-8597	703-428-7168	Kingman

WATERSHED TEAM

Ming Tseng, Team Leader	CECW-EWW	202-761-8505	703-428-7218	Kingman
Robert Bank	CECW-EWW	202-761-4243	202-761-4243	GAO
Charles B Chesnutt	CECW-EWW	202-761-1853	703-428-7240	Kingman
David B Wingerd	CECW-EWW	202-761-8502	703-428-7219	Kingman

POC: CHARLES PEARRE, CECW-EIS, 202-761-4531

[Return to Index of Articles](#)
